

Claims

1. Process for sterilising a resistant starch composition characterised in that it comprises the steps of:
 - (a) dispersing said resistant starch composition in oil;
 - (b) heating the starch/oil dispersion obtained in step (a) to a target temperature of 100 to 175°C, preferably about 150°C; and
 - (c) cooling the starch/oil dispersion,provided that if the resistant starch composition is granulated potato starch, the oil will be other than rapeseed oil.
2. Process according to claim 1, characterised in that step (c) is carried out immediately upon reaching the target temperature of step (b).
3. Process according to claim 1 or claim 2, characterised in that the resistant starch composition comprises at least 25% by weight, preferably at least 50% by weight, even more preferably at least 60% by weight resistant starch.
4. Process according to any one of claims 1 to 3, characterised in that the resistant starch is maltodextrin-derived resistant starch.
5. Process according to any one of claims 1 to 4, characterised in that the oil is selected from one or more vegetable oils, animal oils and mixtures thereof.
6. Process according to claim 5, characterised in that the oil is selected from a group consisting of: canola oil, coconut oil, corn oil, grape seed oil, olive oil, palm oil, peanut oil, rapeseed oil, safflower oil, soy oil, sunflower oil and mixtures thereof.
7. Process according to any one of claims 1 to 6, characterised in that the starch/oil dispersion contains one part resistant starch for 3-7 parts oil.

8. Process according to claim 7, characterised in that the starch/oil dispersion contains one part resistant starch for about 5 parts oil.
9. Process according to any one of claims 1 to 8, characterised in that an emulsifier is added to the starch/oil dispersion before heating.
10. Sterilised resistant starch composition obtainable by the process of any one of claims 1 to 9.
11. Use of the sterilised resistant starch composition of claim 10 in a nutritional, pharmaceutical or feed composition.
12. Nutritional, pharmaceutical or feed composition comprising up to 10% by weight of the sterilised resistant starch composition of claim 10, and one or more additional ingredients.
13. Nutritional, pharmaceutical or feed composition according to claim 12, characterised in that the one or more additional ingredients include nutrients selected from the group consisting of:
 - a source of protein selected from intact proteins, hydrolysed proteins, peptides, amino acids and mixtures thereof;
 - a source of carbohydrate;
 - a source of vitamins and/or minerals;
 - flavourings and/or colorants;
 - water and/or water miscible liquids.
14. Nutritional, pharmaceutical or feed composition according to claim 13, characterised in that the source of protein is derived from milk, pea, cereals and/or soya.
15. Nutritional, pharmaceutical or feed composition according to any one of claims 12 to 14, characterised in that it is suitable for enteral administration.

16. Method of producing a sterile nutritional, pharmaceutical or feed composition, characterised in that it comprises the steps of:
- (a) sterilising an oil dispersion comprising resistant starch and, optionally, one or more additional ingredients;
 - (b) sterilising a water solution comprising one or more water-soluble ingredients; and
 - (c) combining the sterilised dispersion of step (a) and the sterilised solution of step (b), provided that if the oil dispersion of step (a) is a rapeseed oil dispersion, the resistant starch will be other than granulated potato resistant starch.
17. Method according to claim 16, characterised in that steps (a) and (b) are carried out substantially simultaneously.
18. Method according to claim 16 or 17, further comprising a filling step (d) wherein the sterile nutritional, pharmaceutical or feed composition is aseptically packaged.
19. Method according to any one of claims 16 to 18, characterised in that the oil used in the oil dispersion is selected from one or more vegetable oils, animal oils and mixtures thereof.
20. Method according to claim 19, characterised in that the oil is selected from a group consisting of: canola oil, coconut oil, corn oil, grape seed oil, olive oil, palm oil, peanut oil, rapeseed oil, safflower oil, soy oil, sunflower oil and mixtures thereof.
21. Method according to any one of claims 16 to 20, characterised in that the oil dispersion contains one part resistant starch for 3-7 parts oil.
22. Method according to claim 21, characterised in that the oil dispersion contains one part resistant starch for about 5 parts oil.
23. Method according to any one of claims 16 to 22, characterised in that the oil dispersion comprises an emulsifier.

24. Method according to any one of claims 16 to 23, characterised in that the sterile nutritional, pharmaceutical or feed composition produced comprises up to 10% by weight resistant starch.
25. Method according to any one of claims 16 to 24, characterised in that the sterile nutritional, pharmaceutical or feed composition produced is suitable for enteral administration.
26. Method according to any one of claims 16 to 25, characterised in that the one or more water-soluble ingredients of step (b) include nutrients selected from the group consisting of:
- a source of protein selected from intact proteins, hydrolysed proteins, amino acids and mixtures thereof;
 - a source of carbohydrate;
 - a source of vitamins and/or minerals;
 - flavourings and/or colorants.
27. Method according to claim 26, characterised in that the source of protein is derived from milk, pea, cereals and/or soya.
28. A pharmaceutical composition for use in the treatment of intestinal problems including conditions associated with inflammation of the gastrointestinal tract, digestive disorders, colon cancers, diabetes and obesity, comprising the sterilised resistant starch composition of claim 10 and a suitable carrier.
29. Use of the sterilised resistant starch composition of claim 10 in the manufacture of a medicament for use in the treatment of intestinal problems including conditions associated with inflammation of the gastrointestinal tract, digestive disorders, colon cancers, diabetes and obesity.